Genetic Mutations That May Impact Holmes Cycle NMT, ABP1, MAOA, ALDH В6 GSS, CTH, GCL, Iodine, ECGC (Green Tea) Histidine KIT EMF GSH (Reduced Glutathione) ME1, NOS1, NOS2, NOX, KIT NOS3, SOD1, SOD2, SOD3 SOD1, SOD2, SOD3 Nitric Oxide NOS1, NOS2, NOS3, DHFR, MTHFR A1298C AGXT, SPP1, GRHPR, Histamine Oxalates G6PD, ME1, IDH1, NQ01 HFE, SLC40A1, FTL, TF, Iron ACO1, TRF2 NADPH NOX The "NADPH Steal" Heme Pathways Weakness Sulfites Glutamate DAO, GAD Dopamine DHB ULK1, ULK2, ATG13 MTHFR6c77T, MTR. MTRR, MHMT, PEMT IL-6 Stimulates NOX Aldosterone IL-13 REN, ACE2 Angiotension 1-7 HMOX-1 Angiotension II in anti inflammatory ACE2 Angiotension I-7 ACE Angiotension I ACE2 (upregulation) Histamine Dopamine Testosterone NutriGenetic RESEARCH INSTITUTE Copyright 2020 The Holmes Hypothesis Contributors to this map creation were: Toxic Environmental Factors (epigenetics) that we were not exposed to historically, Robert Miller, CTN Matthew Miller BSc with their negative effects amplified in those with genetic predispositions, causes over stimulation of the NOX (NADPH Oxidase) enzyme. This results in over production of Superoxide, Peroxynitrite, Mast Cells, Histamine and Glutamate. Reproductions of this map without permission of NGRI is forbidden. The NOX Enzyme uses NADPH to produce the free radicals, resulting in what we have named the "NADPH Steal", resulting in less ability to have sufficient This pathway map is for informational, educational and research purposes only. This map was not intended to provide diagnosis or treatment for any disease, and all users of this map agree to hold NGRI and the creators of this pathway map harmless for how they may use it. NADPH to support Phase 1 Detox, produce Nitric Oxide and recycle critical antioxidants such as Glutathione. In turn, these free radicals produced by NOX stimulate Renin, Angiotensin I, Angiotensin II, Aldosterone, IL-6 and NOX, thus resulting in a positive feedback loop that creates a self-perpetuating vicious cycle of inflammation named the "Holmes Cycle."